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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,109	06/08/2005	Lukas Frederik Tiemeijer	NL 021411	1364

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EXAMINER

BAISA, JOSELITO SASIS

ART UNIT PAPER NUMBER

2832

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/538,109	Applicant(s) TIEMEIJER ET AL.	
	Examiner Joselito Baisa	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/8/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/19/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 8 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Lowther [6803849].

Lowther discloses a winding 814A situated in a first plane, a patterned ground shield 804 for shielding the winding from a further layer, characterized in that, winding is at least substantially symmetrical with respect to a mirror plane perpendicular to the first plane; patterned ground shield 804 comprises a plurality of electrical conductive first tracks situated in a first ground shield plane in parallel with and adjacent to the first plane, the first tracks having an orientation perpendicular to the mirror plane 904 [Page 4, Paragraph 37, Figure 9].

Regarding claim 2, Lowther discloses that the first tracks are straight tracks which are at least substantially symmetrical with respect to the mirror plane 904 [Page 4, Paragraph 37, Figure 9].

Regarding claim 8, Lowther discloses the winding is substantially circular [See Figure 9].

Regarding claim 9, Lowther discloses an integrated circuit comprising a substrate 802, a planar inductive component in the further layer being the substrate [Page3, Paragraph 36, Figure 9].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowther in view of Christensen [6794977].

Regarding claim 3, Lowther discloses the instant claimed invention except for the patterned ground shield comprises a second conductive track with an orientation in parallel with said first plane; is symmetrical with respect to said mirror plane, is electrically coupled to said first tracks.

Christensen discloses a second conductive track 13 with an orientation in parallel with the first plane, symmetrical with respect to the mirror plane and is electrically coupled to the first tracks [Col. 4, Lines 9-16, Figure 7].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the patterned ground shield taught by Christensen to the planar inductor structure of Lowther.

The motivation would have been for electrically connecting all the first tracks.

Regarding claim 4, Lowther discloses the instant claimed invention discussed above except for the second conductive track is situated in the first ground shield plane.

Christensen discloses the second conductive track 13 is situated in the first ground shield plane [Col. 4, Lines 9-16, Figure 7].

It would have been obvious to one having ordinary skill in the art at the time of the invention to have a second conductive track located in the first ground shield taught by Christensen to the structure of Lowther.

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The motivation would have been for electrically connecting all the first tracks on the first ground shield plane.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lowther in view of Tung et al. [20030214378].

Regarding claim 5, Lowther discloses the instant claimed invention discussed above except for the patterned ground shield comprises a plurality of electrical conductive further tracks, situated in a further ground shield plane in parallel with said first ground shield plane, said further tracks having an orientation in parallel with said first tracks, and being electrically coupled to said first tracks. The said further tracks are at least substantially symmetrical with respect to said mirror plane.

Tung et al. disclose patterned ground shield with a plurality of electrical conductive further tracks, situated in a further ground shield plane 60 in parallel with the first ground shield plane 62, the further tracks having an orientation in parallel with the first tracks, and being electrically coupled to the first tracks. The further tracks are at least substantially symmetrical with respect to the mirror plane [Page 3, Paragraph 29, Figure 3A].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the patterned ground shield comprising of electrical conductive further tracks taught by Tung et al. to the structure of Lowther.

The motivation would have been minimize an induced loop current to the inductive coil [Page 3, Paragraph 29, Figure 3A].

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lowther in view of Ma et al. [6573822].

Regarding claim 7, Lowther disclose the instant claimed invention and the first and second sub-windings being electrically connected in series.

Lowther disclose the instant claimed invention discussed above except for a winding comprises a first at least substantially spiral-shaped sub-winding with a first center intertwined with a second at least substantially spiral-shaped sub- winding with a second center, said first and second centers shape of said second sub-winding coinciding with each other, the being a mirror-image of the shape of said first sub-winding.

Ma et al. discloses first at least substantially spiral-shaped sub-winding 106 with a first center intertwined with a second at least substantially spiral-shaped sub- winding 108 with a second center, first and second centers coinciding with each other, shape of the second sub-winding the being a mirror-image of the shape of first sub-winding [Col. 6, Lines 30-35, Figure 18].

It would have been obvious to one having ordinary skill in the art at the time of the invention to use the first and second spiral shaped winding taught by Ma et al. to the structure of Lowther et al.

The motivation would have been to enhance inductive capability.

Response to Arguments

With respect to claim 1, Applicant has amended the claim to recite that the plurality of conductive first tracks is situated in a first ground shield plane in parallel with and adjacent to the first plane of the winding. Applicant also has indicated that the structure cited in Lowther, wherein the plane of the winding 814 and the plane of the shield 804 are not adjacent and furthermore are separated by other various components [see Figure 8]. The components that the Applicant had indicated are electrical connections and conductive paths, which are parts of the inductive winding. Therefore, the whole inductive winding itself is considered adjacent to the ground shield.

With respect to claim 2, Lowther discloses the claimed invention except for the ground shield consisting of straight tracks. It would have been obvious to one of ordinary skill in the art at the time the invention was made to alter the shape of the tracks. The tracks disclosed by Lowther are substantially

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straight. Applicant has not disclosed that a straight track would solve any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the tracks substantially straight as shown by the reference.

With respect to claim 8, Applicant argued that Lowther has an octagonal winding compared to what is claimed to be “substantially circular” winding. Lowther has shown on Figure 9 that the winding forms a loop and that makes it “substantially circular”.

Conclusion

The applicant's amendment has been considered. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joselito Baisa whose telephone number is (571) 272-7132. The examiner can normally be reached on M-F 5:30 am to 2:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joselito Baisa
Examiner
Art Unit 2832

jsb



ELVIN ENAD
SUPERVISORY PATENT EXAMINER

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